

Abstract

A method and system are presented for use in non-invasive measurements in a patient's body. A condition of artificial blood kinetics is created at a measurement location in a patient's blood perfused fleshy medium, and this condition is maintained for a certain time period. An external electromagnetic field is applied to the measurement location while under the condition of artificial blood kinetics. A time variation of a response of the blood perfused fleshy medium to this external electromagnetic field is detected, and measured data indicative thereof is generated. The response of the medium can be a photo-acoustic signal obtained in response to incident light, and/or impedance of the medium in response to the applied ac electromagnetic field.